

EUROfusion PSD Management Meeting

# WPSA report 2024-10-5

**Carlo Sozzi**



This work has been carried out within the framework of the EUROfusion Consortium, funded by the European Union via the Euratom Research and Training Programme (Grant Agreement No 101052200 – EUROfusion). Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Commission. Neither the European Union nor the European Commission can be held responsible for them.





# WPSA news: machine status

- ME1 shutdown advancing well
  - Tangential NB connection- completed
  - Saddle loops – completed
  - Diamagnetic loops - completed
  - Acceptance test of divertor cryopumps - completed

- ✓ T-NB connection: total 4 **Completed**
  - 2 connections at P16H completed.
  - Rest of 2 at P04H planned in early Sep.
- ✓ Port assembly: total 23 **~31%→37%**
  - 4 T-NB ports completed
  - 4 LO ports connected to VV
  - 6 ports ready for assembly
- ✓ EFCC: total 18 **~66%→72%**
  - 13 coils completed (Lo x6, Mid x6, Up x1)
- ✓ FPPC trial winding planned in early Sep.
- ✓ FPPC supports 18/36 completed **~50%→50%**
- ✓ SP supports 44/74 completed **~32%→59%**
- ✓ EF1 repair )
  - 12 inlets and 4 inlets completed (LPT passed) **~66%** **ここ**  
**は濱田GLへ**
  - **Port partial cutting was completed.**
- ✓ Saddle loops: 18/18 completed **100%→100%**
- ✓ Pellet guiding tube supports: 8/12 completed **~66%→66%**
- ✓ Diamagnetic loops temporal assembly: 2/2 completed **100%**  
**→100%**

Port activities

In-vessel

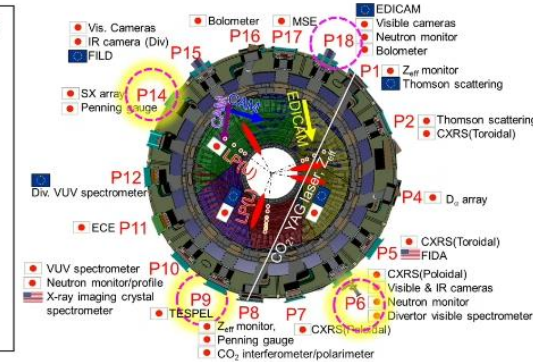
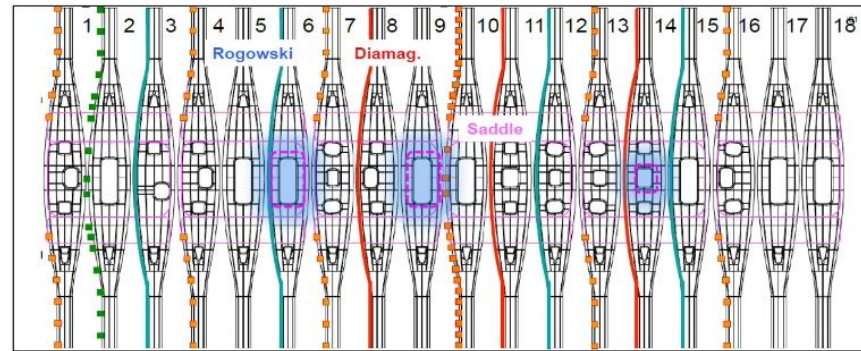


# WPSA news: enhancements

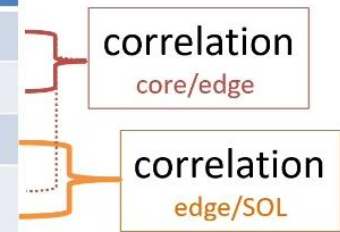
- Doppler reflectometry
  - Agreement CIEMAT-NIFS for a combined proposal
  - 3 toroidal accesses to allow
    - Toroidal correlation
    - Absolute density measurement
  - Detailed feasibility starting
- TPCI: design review completed
  - It is possible and desirable to install and commission in M/E-1 => **depending on availability of support for integration in QST**
  - Hiring of dedicated staff (EPFL and NIFS) being started
- Thomson Scattering system
  - Acceptance of last components: in December 24.
  - Laser maintenance with visit in Naka of the supplier and TS team in January 25

## New proposals of microwave reflectometer ports

- 3 ports (P9, P6(or 18), P14) are feasible to use.



Antenna (plan)	Port	Reflectometer system	Target parameter
① steerable	9	V- & W-band, O- & X-mode	$\tilde{n}_e, V_{\perp}$ (core/edge)
② steerable	6 (18)	V- & W-band, O/X-mode	$\tilde{n}_e, V_{\perp}$ (core/edge)
		Q- & V-band, O/X-mode	$\tilde{n}_e, V_{\perp}$ (edge/SOL)
③ fixed	14	Q- & V-band, O/X-mode (V- & W-band, O/X-mode)	$\tilde{n}_e, V_{\perp}$ & $n_e(r)$ (edge/SOL)





# WPSA news: Meetings

- Technical Coordination Meeting (TCM-42)
  - Hosted by RFX in Padua 25-28 Nov <https://indico.cern.ch/event/1460357/>
  - Agenda not yet available
    - Focus on diagnostics
    - Discussion on W transition
- WPSA planning meeting
  - Hosted by CREATE in Naples 4-6 Dec <https://create.unina.it/wpsa/>
  - Agenda nearly completed, sessions on
    - WPSA activities
    - Report on JT-60SA ET (WPTE)
    - Preparation of transition to W

